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Analysis of Recreation Potentials
of the Hyder, Alaska Management Area

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This paper was prepared as a student project in partial fulfillment of the requirements of the Professional Development for Outdoor Recreation Management program at Clemson University. It in no way reflects USDA Forest Service policy nor are the opinions expressed those of anyone other than the author.

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Title: Analysis of Recreation Potentials of the Hyder, Alaska
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Abstract: Hyder, Alaska is the only area on the Tongass National Forest that is accessible by the mainland road system of North America. In both 1983 and 1984, approximately 50,000 people visited Hyder. They came to see and experience the "Last Frontier."

The project area encompasses two river valleys that contain turbulent glacial streams. The country is rugged and mountainous with peaks to 6,500 feet in elevation. During the 1920's, the area boomed with mining activity. Roads and trails were constructed throughout the area to encourage prospecting and mining. Over time, most have been abandoned or become inaccessible as bridges have fallen into disrepair.

Present visitation and potential access throughout the project area via former mining roads and trails indicate significant recreation potentials. This paper analyzes recreation potential of the area using the Recreation Opportunity Spectrum. Alternatives are presented that propose development of potentials. An alternative is recommended for implementation. Implications and methods to implement the recommended alternative are discussed.

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CHAPTER 1

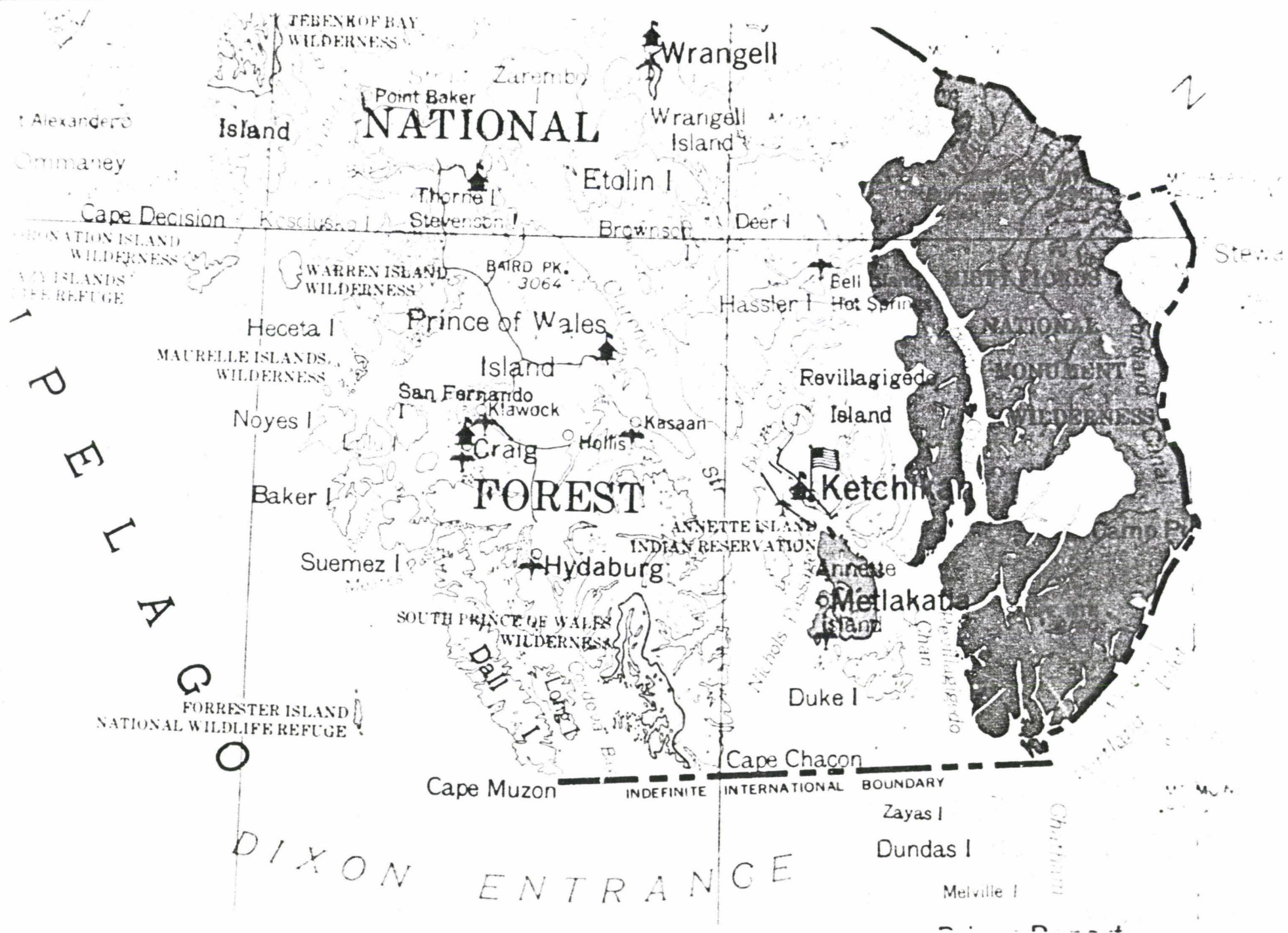
INTRODUCTION AND STATEMENT OF PROBLEM

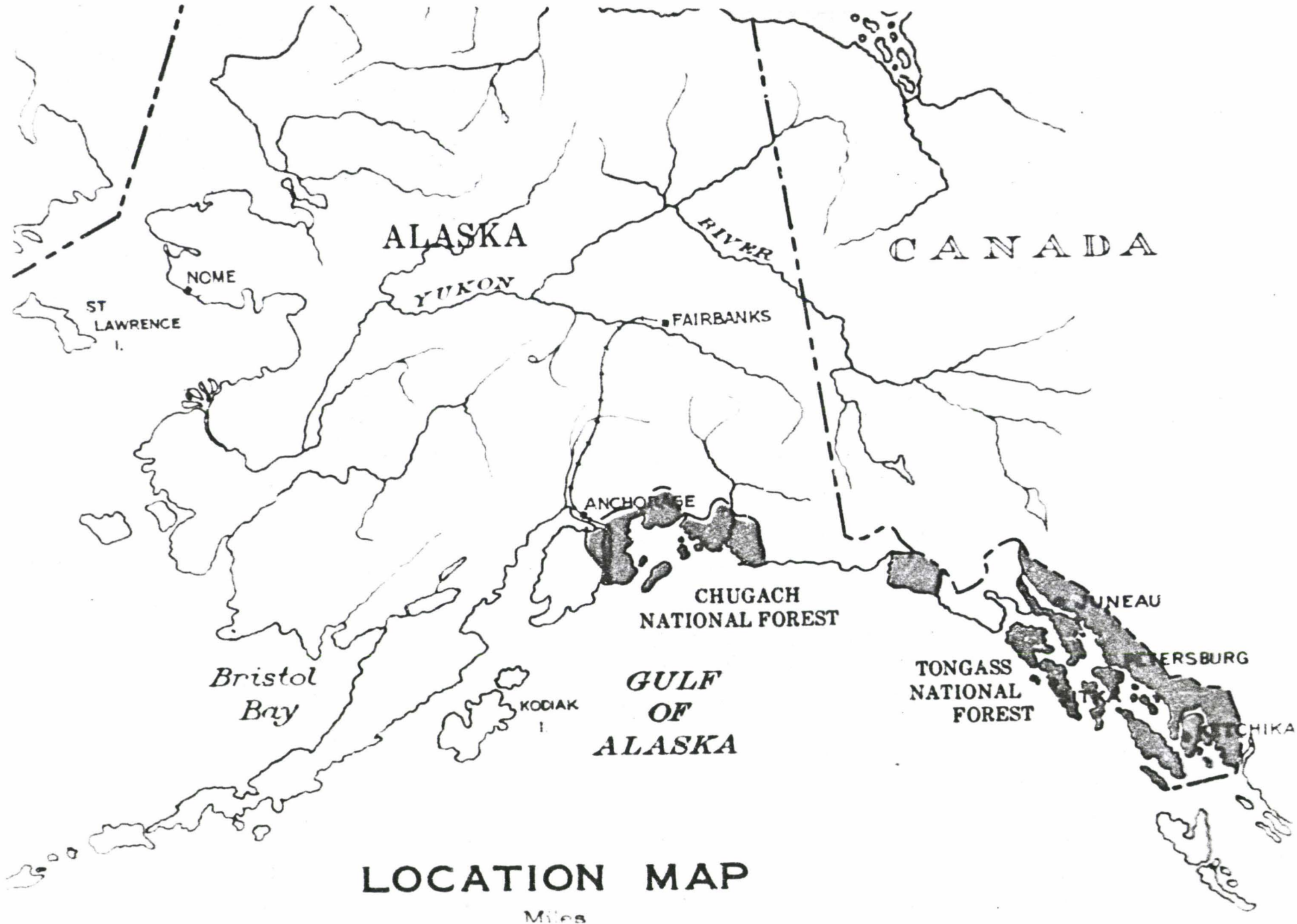
Introduction

The intent of this paper is to analyze the recreation potential of the chosen project area in the vicinity of Hyder, Alaska; to document its recreation potential; and to recommend strategies that meet recreation needs. The project was conceived as a result of hikers who reported on a trip through the project area in 1984; two field trips on the part of the author to the project area; and discussions with residents of the project area.

The area chosen is an isolated portion of forest land on the Ketchikan Ranger District, Tongass National Forest in southeast Alaska. It is commonly referred to as Hyder after a small town (population 100) within the project area. Hyder is the only town on the Tongass National Forest directly accessible by the mainland road system of North America (See Fig. 1). This access via the Cassiar Highway is now paved its entire length to Hyder and is beginning to rival the Alaska/Canada Highway a major transportation route to interior Alaska and the Northwest Territory. Consequently, Hyder received approximately 50,000 visitors in 1984. Although recreation potential of the area has been recognized by the Forest Service for many years, the extent of its potential has never been systematically investigated. Present Forest Service management is minimal, consisting of occasional reviews of mining plans of operation and free use timber permits. The Forest Service does not maintain an office or recreation facilities, and visits to the area are not regularly scheduled.



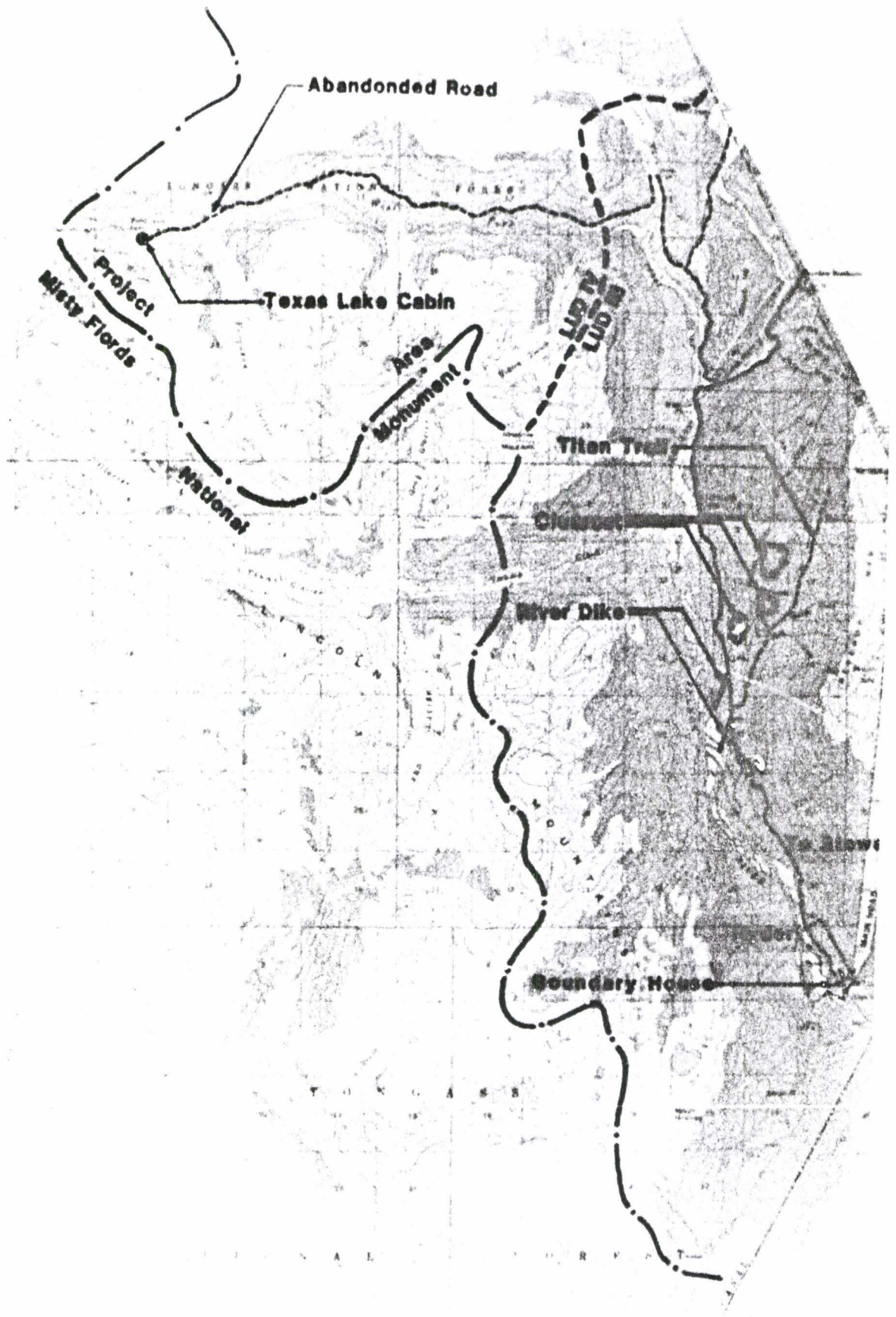




Southeast Alaska, termed Southeast by residents, is an archipelago forested by Sitka spruce, hemlock, and cedar. It has a maritime climate with an average temperature of 42°F and tremendous annual precipitation. Hyder is separated from the main influences of Southeast by its geographic location and topographic character. It is bordered on the west by Misty Fiords National Monument; on the north and east by the Province of British Columbia, Canada; and on the south by Portland Canal, a long narrow fiord of the Pacific Ocean. Stewart B.C. (population 3,000) located on the Canadian border, is adjacent to the town of Hyder (See Fig. 2).

The country is rugged and mountainous with peaks to 6,500 feet in elevation. The project area encompasses two river valleys that contain the Salmon River and Texas Creek, both of which are turbulent, braided, glacial streams. It is a primitive area of majestic scenery. Valley sides climb steeply to rugged, often glaciated or snow covered peaks. Hanging glaciers are visible in each valley. The Chickamin Glacier forms the upper boundary of the Texas Creek Valley. Although vegetation is predominantly spruce and hemlock, the project area is influenced by its proximity to the interior which results in additional vegetative species including beech and silver fir. Wildlife indigenous to the project area includes numerous species found in other mainland areas. Bald eagles are present but in fewer numbers than in the majority of Southeast. Alaska brown and black bear are present but populations are low, apparently due to hunting pressure. Moose are occasionally sighted but appear to be residents of the Chickamin River Valley that cross into the area. Mountain goats are prevalent above the tree line in alpine. They are occasionally hunted, but access is difficult.

For almost 50 years the town of Hyder has remained in its present state, a near ghost town. Only abandoned buildings concealed by second growth and rotting piling in the tidal flats testify that in the first quarter of the century Hyder was a booming mining town. Established in 1907 as Portland City, it was the result of overflow from the mineral rich Stewart, B.C., area and the Klondike Gold Rush. Portland City began to boom, but was soon overtaken by Stewart after the International Boundary was surveyed and the



AREA FEATURES

most valuable mineral deposits were found to be on the Canadian side. This situation was short lived, however, when in 1913 due to speculation and corruption, Stewart collapsed from a population of 10,000 to 17. Portland City began to grow, and in 1915 the name Portland City was changed to Hyder and a Post Office was established. Hyder continued to grow as mineral deposits were found and mines in both Alaska and Canada were developed. Access to the rich Canadian mines was through Hyder up the Salmon River drainage. The community flourished between 1920 and 1929 with a population of 1,000 that supported a public library, churches, stores, schools, and brothels. Declining mineral markets and the relatively low value of deposits on the Alaska side eventually brought the end to prosperity. During this time the Forest Service constructed cabins and trails to aid prospecting and mining. There are remains of several cabins in the area, but the Texas Lake cabin is the only one still in good condition. The Titan Trail, Texas Creek Trail and Salmon Glacier Trail are the few trails that can still be recognized. During the 1930's in an attempt to facilitate prospecting and mining, the Texas Creek Trail and Salmon Glacier Trail were upgraded to roads. Hyder, however, continued to decline until in 1953 there were 36 residents.

The project area has been designated the K-44 Management Area in the Tongass Land Management Plan, TLMP. Management Areas were created by combining major watersheds, termed Value Comparison Units (V.C.U.'s), into logical administrative divisions. To determine resource management direction for these areas, a range of management classes, land use designations (L.U.D.'s), were devised. They range from L.U.D. I, (wilderness) to L.U.D. IV, (high resource development and extraction). L.U.D. II is a roadless, semiprimitive designation and L.U.D. III is a multiple use designation with emphasis on recreation and wildlife resources. The project area, K-44 is composed of 2 V.C.U.'s, one of which is designated L.U.D. III and the other L.U.D. IV.

Statement of Problem

A brief review of the project area demonstrates its high scenic value and high recreation potential as well as the excellent access to it. Discussions in August 1984 with Hyder residents and Canadian Customs officials document high visitation, amounting to more than 50,000 persons in 1984, and the feeling that the area has significant recreation potential. The use and potential has not been developed or managed. The Forest Service and State of Alaska do not maintain recreation facilities in the area. The Lions Club of Stewart, B.C. operates an over used 25 unit campground in Stewart. Neither the State of Alaska nor the Forest Service plan recreation development in the project area.

The combination of these facts shows a significant recreation need that is hardly recognized and not planned for. The intent of this project is to document the recreation potential and need of the Hyder area and to recommend a strategy that meets the needs of visitors and residents. This paper will propose a range of alternatives based on recreation experiences and describe methods to implement and maintain recreation facilities.

Project Limits

Limitations of the project are the geographic area to be analyzed; Forest Plan direction that precludes Wilderness designation but not management for primitive experiences; and reduced budgets that constrain implementation possibilities.

Assumptions

1. Scenic values, climate, access, history and previous development (cabins, trails, mines, etc.) make the project area unique in southeast Alaska.

2. Establishment of recreation facilities in the area will benefit residents and visitors.
3. Canadian Customs border crossing counts are accurate.
4. Residents comments are accurate and genuine.
5. Field observations of visitors are accurate.
6. Interest in Misty Fiords National Monument and potential access to it via Hyder are significant concerns.

Limitations of Data Collection

Data collection was limited due to cost and travel time to the project area and the limited quantity of recreation research on southeast Alaska.

1. Research and sampling was not quantitatively conducted to determine the nature of existing recreation use.
2. Canadian Customs border crossing counts of visitors to Hyder and limited field observations were the only sampling used.
3. Recreation research on southeast Alaska is limited to the Alaska Public Survey and a study by the Institute of Social and Economic Research of the University of Alaska.

CHAPTER II

LITERATURE REVIEW

Literature used for the purpose of this study is summarized below.
Information was derived to develop and identify the following:

1. Baseline data information on the project area including past use, history, and recreation trends in Southeast Alaska; and
2. Management direction and philosophy for the project area; and
3. A study procedure.

Baseline Data

1. "Discussion with Forest Archeologist, Chris R. Campbell, on the history of the Hyder area," August 1984 and January 1985.
2. "Diary of Forest Service Employee, S.S. Sweening," 1923. Sweening was stationed in Hyder during the summer of 1923 to maintain trails and cruise timber.
3. "U.S. Forest Service 1650 Historic File," The file includes photographs and it documents Forest Service activities in the area.
4. "National Demand for Developed Recreation and Tourism in Southeast Alaska - An Overview," Institute of Social and Economic Research, University of Alaska, April 1978.

Characteristics of visitors and tourism; attractions drawing visitors; access and modes of travel to Southeast Alaska; character of recreation use and facilities; and present needs, future needs, demand, and trends are discussed in this report. Conclusions of the report that are pertinent to this paper are that:

Developed camping and dispersed recreation areas will be greatly impacted by a projected dramatic increase in visitation to Southeast Alaska.

Camping participation levels in Southeast will triple by the year 2000.

The fastest growing segment of the recreation market is short adventure or wilderness touring. This will create an increased demand for accessible wilderness trails with automobile access to trailheads.

Completion of the Carcross Highway will increase visitation to Skagway and place new demands on the Forest Service for facilities. The present traffic to communities on this road is considerable.

Campground use in southeast Alaska grew from 28,000 R.V.D.'s in 1973 to 88,000 R.V.D.'s in 1975.

5. "Selected Findings from the Alaska Public Survey; A Summary of Responses from Southeast and Southcentral Alaska", Roger N. Clark and Darryll R. Johnson, August 1981.

In this document Clark and Johnson interpret responses of the Alaska Public Survey that relate to recreation uses of coastal and upland environments. Information presented that pertains to this paper is the activity preferences of survey respondents. They are:

- Hiking on established trails, 76% of respondents.
- Use of campgrounds and picnic sites, 74% of respondents.
- Fishing and hunting, 63% of respondents.
- Spending time in backcountry, 48% of respondents.

6. "The Alaska Public Survey, Findings Related to Wilderness Areas in Southeast Alaska," Roger H. Clark, November 1981.

Results of the survey indicate that recreationists believe that Misty Fiords National Monument is difficult to access. Seventy percent of the survey group would use uplands of Misty Fiords National Monument for backpacking. Additional trails in Misty Fiords National Monument are desired by 98 percent of the survey group.

7. "Findings of the Alaska Public Survey on the Importance of Natural Resources to the Quality of Life in Southeast Alaska," Institute of Social and Economic Research, University of Alaska.

Views of Alaskans concerning use, management and planning of resources including recreation are examined. Findings related to recreation include:

The major barrier to recreation is a lack of accessible places for dispersed recreation.

The need for more cabins, campsites, picnic facilities, and trails was expressed.

The need for additional trails in backcountry and expansion of existing trails was stated.

8. "Report and Recommendations of the Alaska Marine Highway Task Force," April 1984.

A comprehensive review of the Alaska Marine Highway was conducted to establish a guide to operate and expand the system. Public meetings were held in Southeast Alaska towns including Hyder as well as Stewart, British Columbia. The report includes minutes of meetings in Hyder and Stewart. Residents stated that the Stewart/Hyder area has tremendous recreation potential and that visitation was high enough to support ferry service. The report documents that the Stewart campground/R.V. park is full the majority of the recreation season and that 34,000 tourists visited Hyder during the summer of 1983. This figure was recorded on a 40 hour work week by Canadian Customs. Based on these facts the Task Force recommended ferry service to Hyder.

Management Direction

The Tongass Land Management Plan and Forest Service Manuals were researched to identify current management direction for the project area and to determine methods available that might be used to implement recommendations of this paper. It was the author's intent to ensure that recommendations were consistent with current land use and could be realistically implemented.

1. "Tongass Land Management Plan, Part I" U.S. Forest Service, 1979.

In the socio-economic analysis conducted for TLMP, it was found that employment options in Hyder are most likely to be limited to mining and tourism. To determine land allocation recommendations, the potentials of selected resources in each V.C.U. were rated. They are documented in Appendix C of TLMP. Resources related to this paper were rated as follows:

- Using a scale of 0-30, potential for wilderness experiences was rated 23.
- Using a scale of 1-5, potentials for the following resources were rated as shown.
 - A. Primitive recreation experiences 5
 - B. Semiprimitive recreation experiences 4
 - C. Concentrated recreation experiences 4
 - D. Scenic and ecological diversity 5

2. "Tongass Land Management Plan, Part II", U.S. Forest Service, 1983.

This document summarizes potential activities in management areas and recommends activity scheduling. Recreation construction in the project area is placed in the future category, however potentials are recognized. It is recognized that the area is the only point of the Tongass National Forest accessible by road from the U.S. highway system and that trail access to Misty Fiords National Monument can be provided.

3. Forest Service Manuals 2300 and 1830 provide direction for concessionaire and volunteer agreements.

Study Procedure and Philosophy

1. "Region-10 Recreation Opportunity Spectrum Handbook". This handbook adapts the R.O.S. system to Alaska.
2. "Social Concepts for Outdoor Recreation Planning," George H. Stankey. This article discusses social science concepts in relation to recreation planning. Principles of the recreation opportunity spectrum and the concept of substitutability of recreation activities are included.
3. "Notes on Psychology of Outdoor Recreation from lectures by Rich Schreyer"¹, Outdoor Recreation Management Short Course, Clemson University, September 1984.

CHAPTER III

PROCEDURES

The procedure used to analyze the recreation potentials of Hyder and recommend development alternatives is described below. It makes use of the process described in the Region-10 Recreation Opportunity Spectrum Handbook and the land management planning process.

1. Project Area - Criteria for delineation of the project area were topographic and administrative. The project area is a distinct geographic unit on the Ketchikan Ranger District. The study population is the total population using the project area including residents of Hyder, Stewart, and visitors.

2. Data Collection - Methods of data collection used in the project were public meetings, literature review, field inventory, map inventory, and air photo inventory.

Public meetings were held by the Alaska Marine Highway Task Force and the U.S. Forest Service. Objectives of the meetings were to collect public opinion and information on the project area. Facilitators were used in all meetings. During the U.S. Forest Service meeting, maps were used to stimulate discussion and to record information. The objective of the literature review was to obtain a historic and management perspective on the project area as well as recreation trends and needs in Southeast Alaska.

Objectives of the field inventory were to refine and validate map and air photo generated inventories and to survey known and potential recreation features. Visual Quality and R.O.S. mapping required field work to validate assumptions and verify accuracy. Forest Service records indicated the existence of cabins and trails constructed in the 1920's. Field inventory documented their existence and condition.

3. Definition of Recreation Needs - Information derived from literature and public comments was summarized into a limited number of statements depicting the existing situation. The statements of existing situation were interpreted to identify recreation needs. Needs were expressed both as experiences and facilities.

4. Inventory - The inventory utilized the Recreation Opportunity Spectrum (ROS). First R.O.S. settings were developed and their characteristics recorded through knowledge gained in the field. Next, attractive features and significant areas were determined and their characteristics and attributes identified.

5. Analysis - The R.O.S. process was also utilized in this step. R.O.S. settings were analyzed to identify and evaluate recreation experience potentials. The settings were also analyzed to determine activity opportunities that could or do occur with the previously identified experience potential. Activity opportunities were divided into two categories, activities (existing and potential), and developments (existing and potential). The characteristics of activities and developments were then identified.

6. Alternative Formulation - Alternatives were created through matching recreation needs with experience and activity potentials identified in the analysis. A range of alternatives was developed to respond to management philosophy; to emphasize the variety of potentials; to respond to budget constraints; and to be matched to the ability to realistically implement projects through budget, manpower, and volunteer limitations.

7. Alternative Evaluation - Alternatives were evaluated based on the range of experiences that could be provided; their ability to meet recreation needs; cost to implement; and compatibility with present management direction.

8. Recommendation - Methods to implement alternatives are discussed. They are based on present management philosophy and budget constraints. Implications of implementing alternatives are discussed, focusing on potential resource conflicts, benefit to the community, and introduction of a Forest Service presence. Based on the evaluation and discussion, an alternative and method of implementation are recommended.

CHAPTER IV

PROJECT ANALYSIS

The Recreation Opportunity Spectrum (R.O.S.) and the land management planning process were combined to create the project analysis. Inventory and evaluation procedures of R.O.S. were used within the inventory, analysis, alternative formulation, and alternative evaluation steps of land planning.

1. INVENTORY DATA

Collection of data consisted of literature review, public meetings, personal communication, and inventory of the project area through field trips and use of R.O.S. Information compiled with the exception of the project area inventory is summarized in the statements below and presented in full in Appendix A.

- Visitors to and residents of Hyder expressed the desire and need for recreation developments in the project area.
- Visitation to the project area is increasing to a significant level, approximately 50,000 in 1983 and 1984, as the Cassiar Highway becomes a major route to the "Last Frontier." A Canadian Customs official stated that "Almost every visitor to Hyder is coming to see 'the Last Frontier.' I think this is ironic because British Columbia has wilderness, but they want to camp out in Alaska."
- There is a need in Southeast Alaska for additional developed recreation sites and hiking trails.
- Access is the main factor limiting recreation use, specifically backcountry use in areas such as Misty Fjords National Monument.

- Visitors to Hyder are mainly retirees with recreation vehicles both from the U.S.A and Canada. There is, however, a significant interest by younger recreationists for backcountry experiences.
- Hyder residents are willing to volunteer for recreation projects.
- Service to Hyder by the Alaska Marine Highway will dramatically increase visitation. A bill proposing ferry service is in the Alaska Legislature.

When analyzed, these statements give an accurate indication of recreation needs related to Hyder. Identified needs are presented below and are expressed as experiences and facilities. They are:

- Educational/interpretive opportunities that will present the history of the area, Forest Service resource management and recreation potentials.
- Camping opportunities for visitors who wish to experience the area with an extended stay.
- Shelter in remote areas.
- Remote/primitive experiences.
- Day use opportunities for visitors who wish brief contact with the Hyder area.
- Trails, developed recreation sites, and picnic facilities.
- Access to remote areas including Misty Fiords National Monument.

The project area inventory was conducted using direction outlined in the Region-10 R.O.S. Handbook. Knowledge gained during field trips was used in the delineation of R.O.S. classes and in the identification of attractive features and special areas.

R.O.S. Classes

R.O.S. Classes in the project area are Rural, Roaded Natural, Semi-Primitive, Non-Motorized, Primitive I and Primitive II (See Fig. 3). The town of Hyder defines the Rural class. It is not within the National Forest but it is a significant contributor to recreation potential. There are 5 to 8 buildings in the "downtown" area and 15 to 20 dwellings in the "residential" area. All have a rustic, "Alaska" character. Roads are narrow and unpaved. The setting is natural with much open space and vegetation.

The Roaded Natural class is centered on the 11 mile long road that runs along the Salmon River from Hyder to the Canadian Border. It is a predominantly natural environment within the National Forest. Resource modification blends with the natural setting and includes 2 river dikes, old mines, sections of a tramway, and two 15 year-old clearcuts. The river dikes were constructed in 1974 to protect the main road from annual flooding of the Salmon River. They are approximately 1000' long. Vegetation has been only slightly modified, its appearance being old growth composed, as described above, of a mix of maritime and interior species. Fish Creek and Marx Creek support salmon runs including a unique species of chum salmon that average 20 lbs. per fish. The start of the Titan Trail is within this class. It is an abandoned pack trail constructed by the Forest Service in the early 1920's to access mining claims. The section in this class was cleared and improved in 1983 by citizens of Hyder. Although the trail does not have signing or a trailhead, the gradient is excellent as it was originally developed for pack horses.

The Semi-Primitive Non-Motorized area is a mountain side located between the Roaded Natural area and the Canadian Border. It is a predominantly unmodified setting, characterized by an alpine area and by forested slopes dissected by snow slide paths. There are several parcels of private land with the remains of old mining operations. Eighty-five percent of the Titan Trail runs through the area. It is not cleared or improved and is difficult to locate or follow.

The lower slopes of the Texas Creek Valley and an abandoned road that follows Texas Creek are the center of the Primitive II area. It is a predominantly unmodified natural environment with only isolated remnants of human activity that includes such features as the roadbed; a collapsed covered bridge; the remains of 2 miner's cabins; and one miner's cabin, the Texas Creek cabin, that is maintained by residents of Hyder. The road is overgrown with alder and is isolated from the main road by two collapsed bridges. Motorized use occurs only during winter and consists of snow machines. See Appendix B, R-10 R.O.S. Handbook for an explanation of motorized use.

The Primitive I area is an unmodified environment encompassing the mountains that define the Salmon River and Texas Creek Valleys, a major glacier, numerous smaller glaciers, and 2 stream valleys. It is bordered by Misty Fiords National Monument, the PII and RN R.O.S. classes, and Portland Canal. Access to any section of the area is highly difficult. Potential to encounter evidence of historic use is minimal, but does exist, as residents have described how hardy prospectors once trekked through seemingly inaccessible areas in quest of gold.

Attractive Features and Special Areas

The entire project area is rated as an "A" landscape under the Visual Management System. It is in the Coast Range character type which consists of dramatic landforms, glacially created features, and diverse vegetation patterns. Within the landscape are attractive features and areas of special character (See Fig. 4).

Salmon River - The Salmon River is a fast, wide glacial river with the characteristic blue green color of glacial streams.

Texas Creek - This is also a fast glacial stream that is braided in its lower reach and has the characteristic blue green color of glacial streams.

Salmon River Valley - Steeply sloping mountains to 6,500 feet in elevation form this valley. It is 1/2 to 3/4 mile wide at the valley floor. Diverse vegetation patterns, hanging glaciers, and a strong feeling of space are significant characteristics of the valley. Geologically it is young; turn-of-the-century photographs reveal that the Salmon Glacier extended to within 1/2 mile of the junction of the Salmon River and Texas Creek.

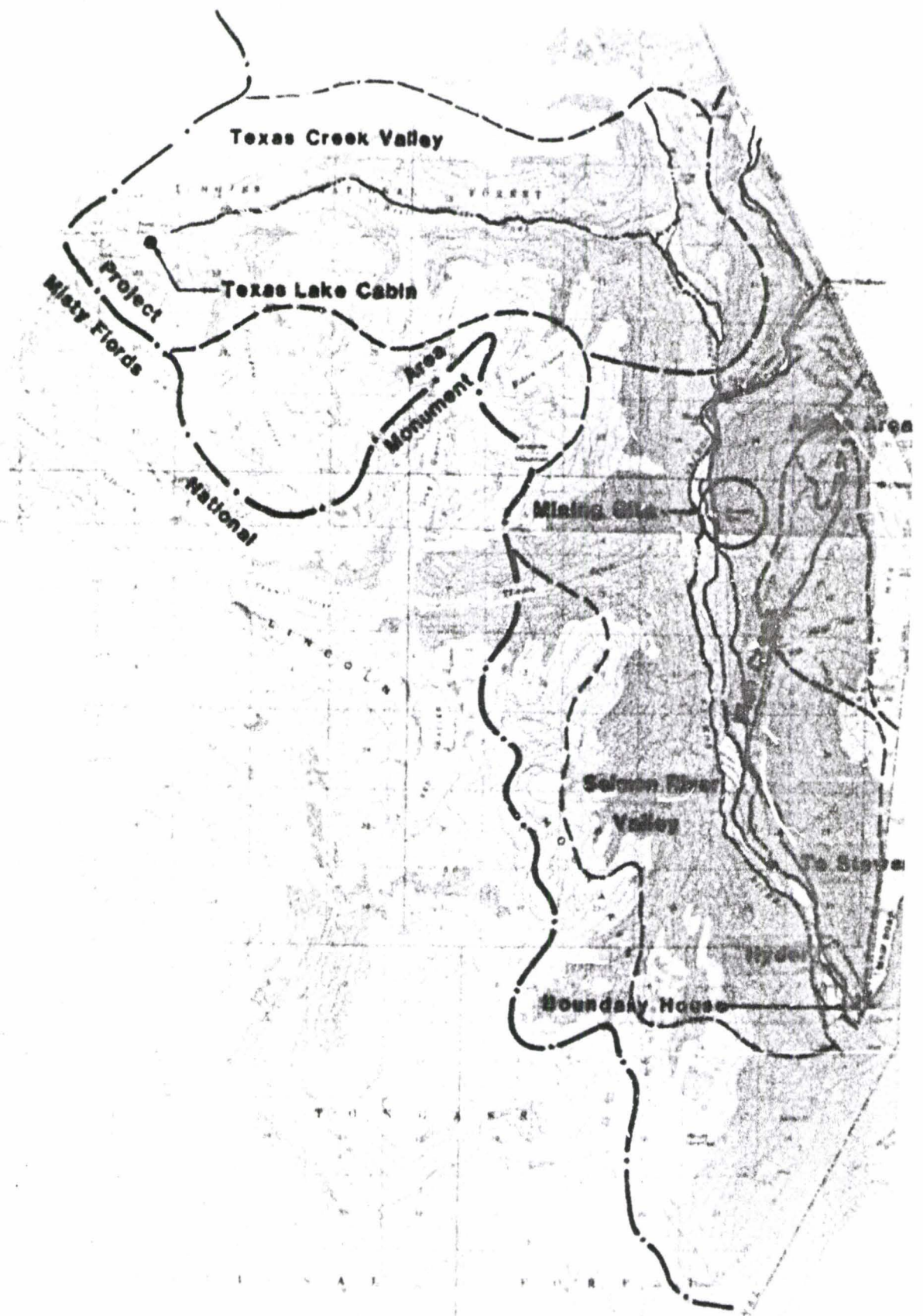
Texas Creek Valley - The valley is formed by steeply sloping mountains to 6,500 feet in elevation. It is a narrow valley, 1/4 mile wide at its floor. Vegetation changes from forest in the lower reach to barren ground at the Chickamin Glacier's edge. Glaciers are visible along the entire length of the valley.

Alpine Areas - Alpine areas are open with low vegetation and rock outcrops. Dramatic changes in space from enclosed forest to views of surrounding mountains and glaciers are prevalent.

Fish Creek - Fish Creek is a fast, narrow stream. A Forest Service fisheries enhancement project is planned for summer 1985. It is intended to improve spawning and rearing habitat, particularly for the unique chum salmon species that averages 20 pounds per fish. It is an important attraction for visitors.

Glaciers - Hanging glaciers are visible from most view points in the area. The large and active Chickamin and Through Glaciers form one boundary of the project area. They are accessible by foot from the Texas Creek Valley.

Boundary House - The Boundary House is a 15' x 15' stone structure near the Canadian Border along the Stewart/Hyder road. It was constructed in 1897 as a supply house for the International Border survey and is on the National Register of Historic Places.



**ATTRACTIVE
FEATURES**

Texas Creek Cabin - This uniquely constructed two-story log cabin is located adjacent to Texas Lake in the Texas Creek Valley. It was constructed by miners during the late 1920's and has been regularly maintained for local use.

Remains of Past Mines - There are remains of several mines located on private land that operated during the 1920's. Features include adits, tailings, and equipment. Associated with these are the remains of an aerial tramway that at one time was the longest in existence. Although these features are on private land, they are attractions and reflect a high point in Hyder's past.

2. ANALYSIS

This section is composed of an analysis of R.O.S. classes and an analysis of activity opportunities. The purpose of the R.O.S. class analysis is to identify and evaluate potential recreation experiences in each class. The activity opportunity analysis will determine and evaluate existing and potential recreation activities. It will also identify existing and potential recreation development that could facilitate these activities.

R.O.S. Class Analysis

Consisting of the town of Hyder, the rural area, has opportunities for social interaction. The history and "Alaska" character of Hyder present opportunities for educational and interpretive experiences. The dramatic scenery of the project area provides a back-drop for these experiences as well as those centered on day use activities such as picnicking. Potential visit duration is 2 to 4 hours.

The Roded Natural area provides opportunities for motorized and non-motorized experiences. The main road accesses the forest and thus opportunity for interaction with the natural environment. Access to the Salmon River is possible via the dikes and several vehicle pull offs. The Titan Trail makes possible travel into the forest and interaction with the natural environment. Chances to use outdoor skills are present as dispersed camping opportunities exist, however, potential to experience risk, isolation, and challenge are low. Fish Creek and the old mining remains have potential for social and educational experiences through interpretation of Forest Service resource management and area history. Potential visit duration ranges from several hours to several days.

The Semi-Primitive Non-Motorized area has high potential to experience solitude, independence, and the natural environment. Chances for risk taking and outdoor skills are also present. These potentials center on the Titan Trail which, in its entirety, runs from the main road to alpine. The alpine area accessed by the trail has potential for off-trail experiences. Potential visit duration ranges from several hours to several days.

The Primitive II area with potential access via the roadbed has extremely high opportunities to experience isolation, independence, and interaction with the natural environment. Potentials for risk taking and the use of outdoor skills are numerous. The Texas Lake Cabin and the Chickamin and Through Glaciers are special attractions that would enhance experiences. They would provide a trip destination and focal point. Potential visit duration ranges from 3 days to 10+ days.

The isolated character of the Primitive I area creates the highest potentials for experiencing isolation, independence, risk taking, challenge, and interaction with the natural environment. Chances for contacting the other people are minimal.

Activity Opportunities

Existing and potential recreation activities and existing and potential recreation developments are discussed below. Existing activities and developments were identified through field inventory and public contact. Potential activities and developments were determined through analysis of the experience potentials of each class and field inventory.

Existing Activities

The nature of existing activities in the project area is dispersed. Recreationists take advantage of natural attractions and informal sites. Activities that are presently occurring are viewing scenery and wildlife, dispersed camping, picnicking, hiking, and snow machine use.

The location of the main road adjacent to the Salmon River provides views to the surrounding scenery. The salmon run in Fish Creek attracts black bear. The main road crosses the creek and parallels it for 3/4 mile providing several points for viewing wildlife. Picnicking and dispersed camping occur along the dikes and pull-offs of the main road. However, areas are small and relatively few in number. The lower section of the Titan Trail has been cleared for approximately 1 1/2 miles. Trail gradient is gentle to moderate and the tread is in good condition. Snow machine use occurs along the main road and the abandoned road of the Texas Creek Vally. The valley is only accessible when the Salmon River and Texas Creek are frozen.

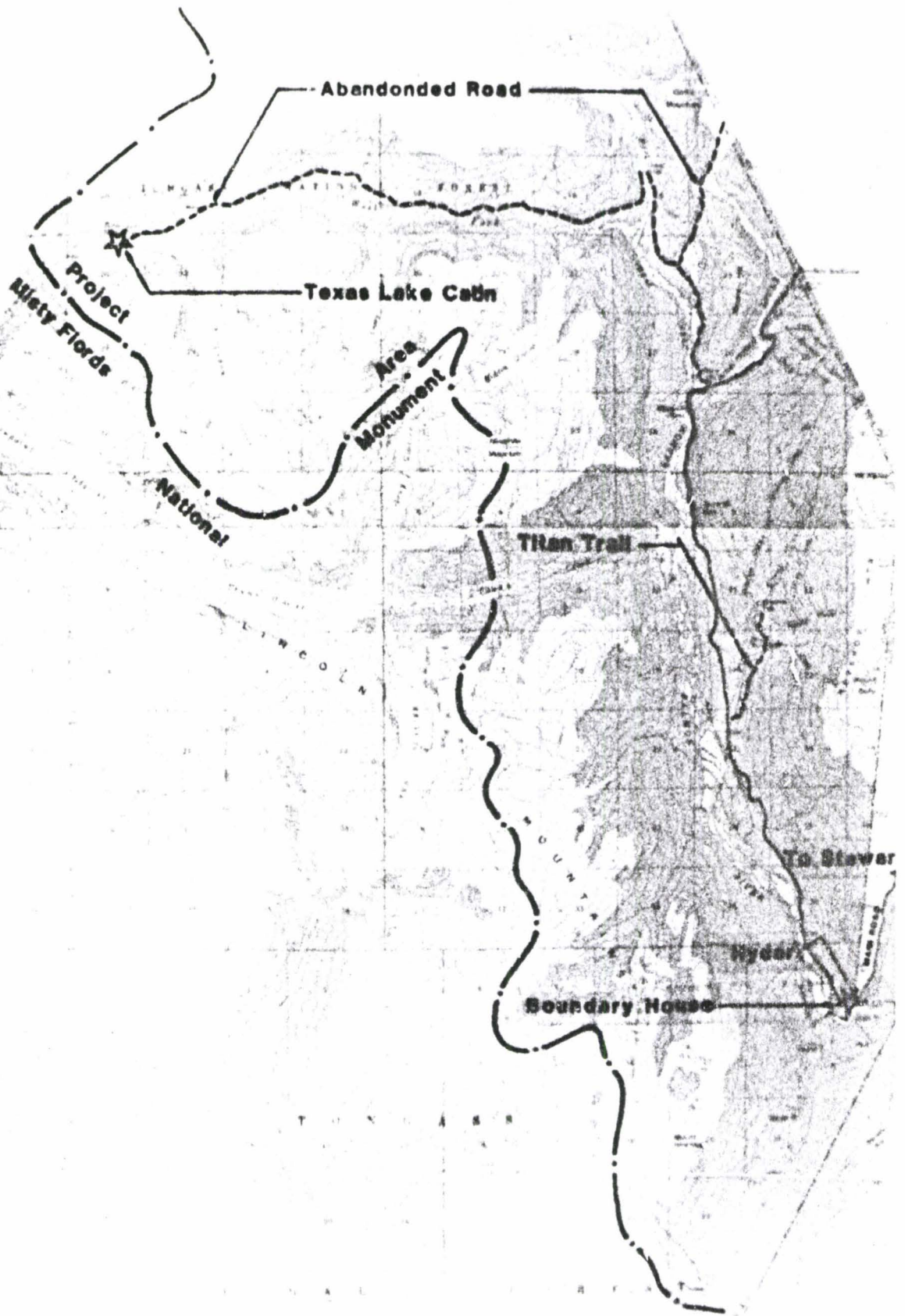
Potential Activities

Potential activities refer to opportunities associated with the identified recreation needs. They are also derived from the experience potentials identified in the R.O.S. class analysis. Interpretive services, developed camping, hiking, picnicking, and primitive camping are the potential activities.

Interpretive services may include history of the area, Forest Service resource management, and recreation opportunities in the area. High visitation figures recorded by Canadian Customs and public comment demonstrate that developed facilities for camping and picnicking would be highly utilized. Potential exists for new trails to access the extensive back country of the area. New trails would facilitate hiking, backpacking, and primitive camping.

Existing Developments

Although there are no developed facilities in the project area, there are existing developments related to past mining activity that have significant potential (See Fig. 5). The unique Texas Lake cabin is located within 1 mile of the boundary of Misty Fiords National Monument. If designated for public use, it will require rehabilitation. The Titan Trail begins at the main road and runs to alpine. The lower section of the trail is brushed and in good condition. It continues past a junction with the unimproved section that accesses alpine and terminates in one of the old clearcuts. The Boundary House is located on the Alaska/Canada border adjacent to the main road and is highly visible. It is not developed, but was reconstructed by Hyder residents several years ago after it was placed on the National Register of Historic Places. The abandoned Texas Creek road is overgrown with alder. Its tread is in good condition. It accesses the Primitive II area, the Texas Lake cabin, and the border of Misty Fiords National Monument. The Salmon Glacier Tractor Trail is an old mining road overgrown with alder. It accesses the Salmon River via the Texas Creek roadbed.



**EXISTING
DEVELOPMENT**

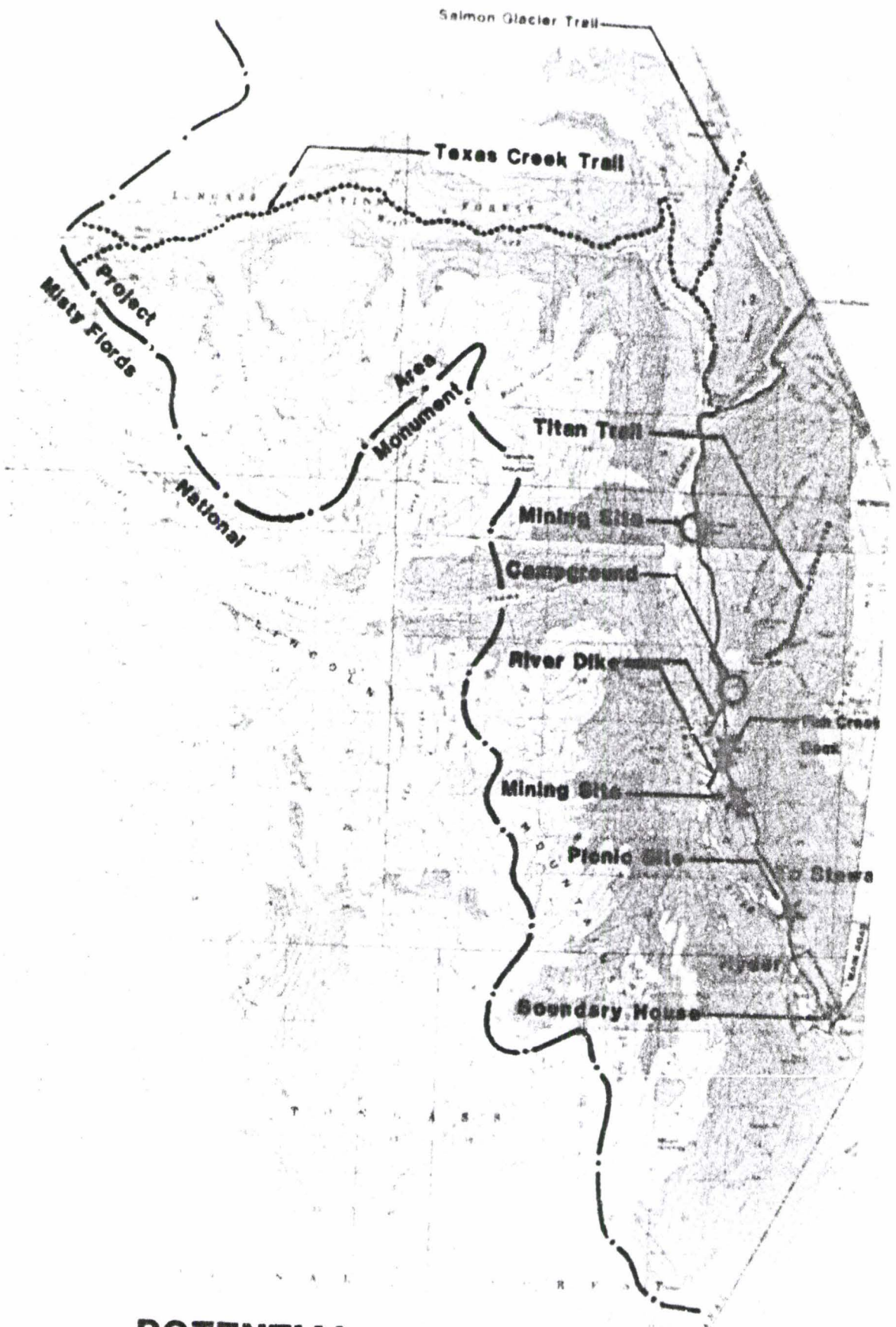
Potential Development

Potential development is in response to recreation needs and the potential activities previously identified. The existing facilities discussed above and sites identified during field inventory are proposed as potential developments (See Figure 6).

Potential exists for the development of a 15-20 unit campground. The site is level with predominantly mineral soil. A rock pit with an access road is adjacent to the site and may be used for campground development. The site is vegetated with alder and red cedar as a result of timber harvest that occurred approximately 20 years ago. Fish Creek forms the eastern border of the site while the main road forms the western border. A barrier that prevents salmon access to this portion of Fish Creek is down stream from the site. Water quality is good.

Sites with potential for developed picnic areas are located along the dikes. As previously stated, they are presently used for dispersed camping or picnicking. Tables, fire rings, and trash receptacles would be needed to upgrade the sites.

The Boundary House which is managed by the U.S. Department of Commerce and Bureau of Land Management could be utilized as a visitor center. Parking space and signing would be needed. Design of the interior to accommodate information and interpretation functions is necessary prior to use. Fisheries enhancement projects in Fish Creek provide an additional interpretive opportunity. Parking space, signing, and a viewing deck would be required.



**POTENTIAL
DEVELOPMENT**

Potential exists for the development of several trails. The upper section of the Titan Trail requires signing heavy brushing and construction of several minor trail structures. It accesses alpine and views to the surrounding country. A trail in the Texas Creek Valley would utilize the abandoned road. Development would require approximately 1/4 mile of tread work, construction of 2 major foot bridges, signing, and a trailhead. It would provide access to backcountry, the Texas Lake cabin, and the border of Misty Fjords National Monument. Development of the Salmon Glacier Trail would utilize the old tractor trail. Brushing and tread work would be required.

3. ALTERNATIVES

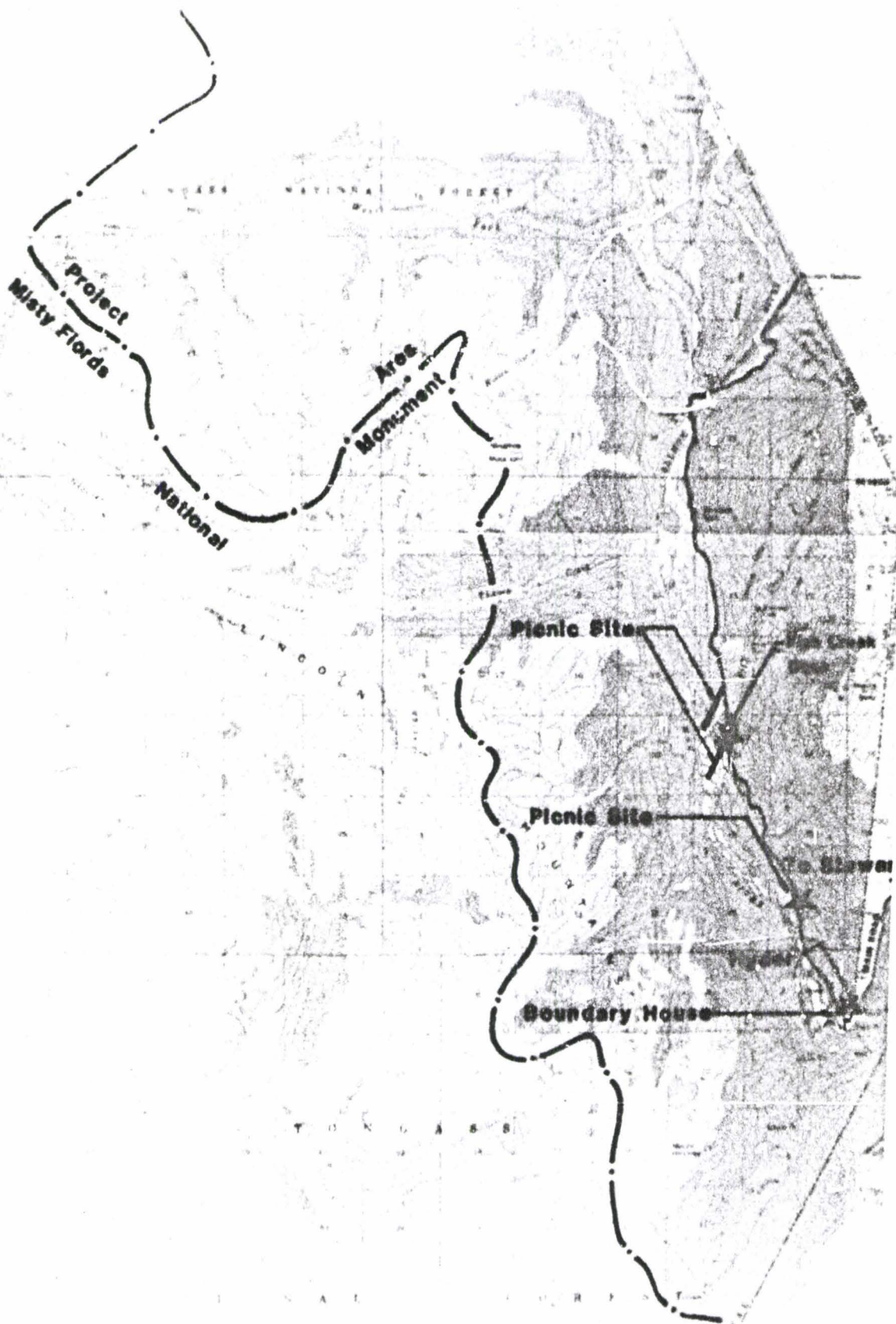
The following alternatives have been developed to cover the range of potential recreation experiences in the project area. Each alternative attempts to emphasize certain experiences although several alternatives have a wide range. Emphasis on specific experiences was done to provide flexibility to meet changing recreation needs; to respond to management philosophy; to reflect budget constraints; and to match the community's present and future ability to assume the responsibility of implementation.

Implementation of any alternative and its subsequent operation and maintenance is proposed through volunteer and concessionaire agreements with the Hyder Community Association. The cost figures presented make this assumption and, therefore, only include materials.

Alternative One

Rural (R) and Roaded Natural (RN) opportunities are emphasized by development of day use, visitor information and interpretive facilities. The Boundary House would be utilized as a visitor/interpretive center. Information on area history, Forest Service resource management and area recreation opportunities would be available. Wildlife viewing and interpretation of the fish habitat management of Fish Creek would be enhanced by the construction of a viewing deck. Picnic sites would provide additional day use opportunities for visitors. Sites receiving existing use would be upgraded by the addition of tables, fire rings, and trash receptacles. Development of alternative one facilities would create social, interpretive and educational experiences.

<u>Facility</u>	<u>Experience</u>	<u>Cost</u>
Boundary House	Social, Educational, Interpretive	\$ 4,000
Fish Creek Deck	Social, Educational, Interpretive	\$ 4,500
Picnic Sites	Social	<u>\$ 3,500</u>
	Total	\$12,000



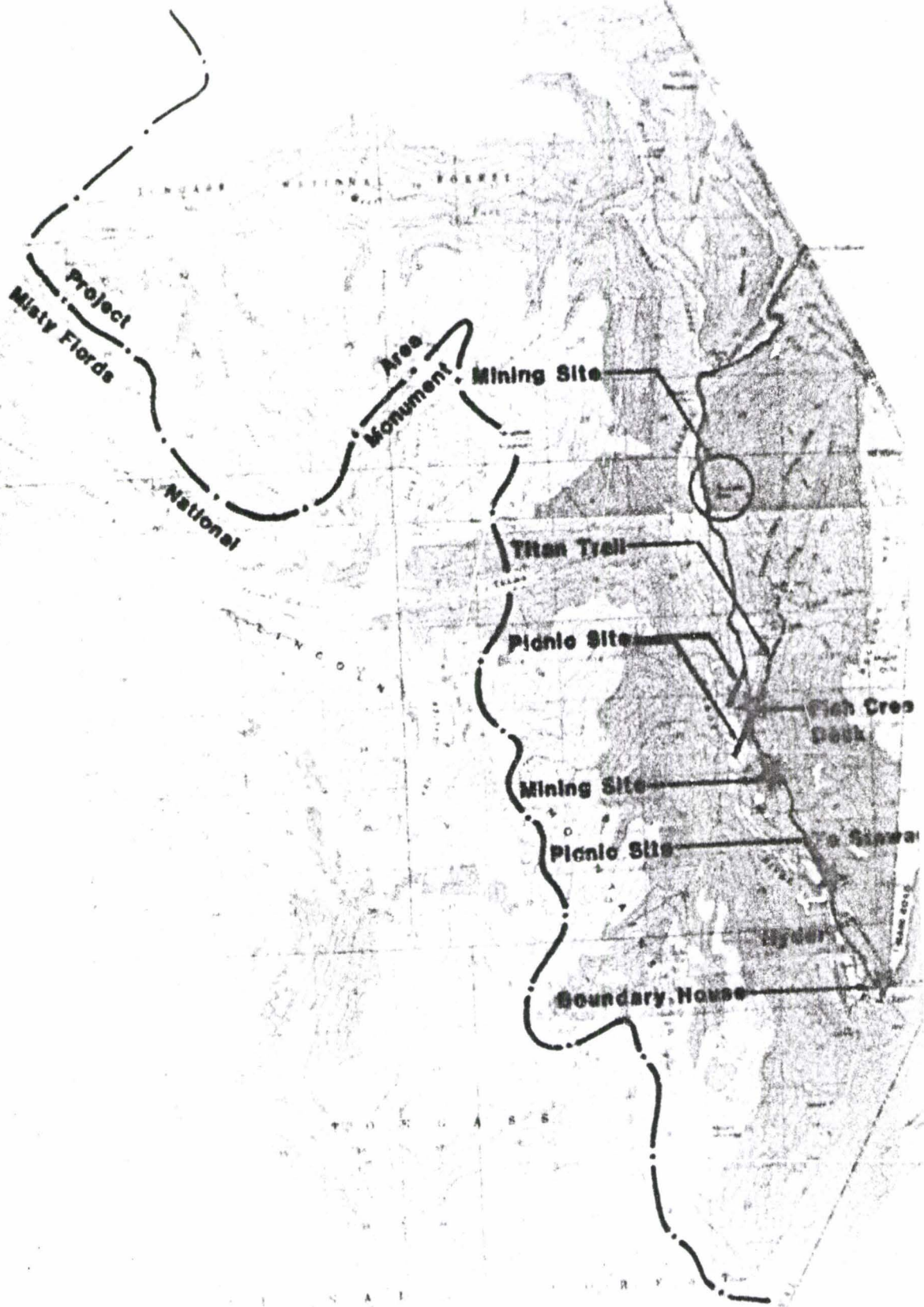
ALTERNATIVE 1

Alternative Two

Opportunities in the Rural class are retained as in Alternative 1 while Roaded Natural opportunities are increased and Semi-Primitive Non-Motorized (SPNM) opportunities are added. The remains of mining activities in the RN class would have signing, access, and literature developed to increase visitor opportunities. Inclusion of the lower section of the Titan Trail, 1½ miles, in this alternative expands opportunities in the RN class as well as adding SPNM opportunities. Development of the trail including a trailhead and signing would provide visitors access to the forest. The section of trail in the RN class winds its way on a gentle grade through second growth forest to Fish Creek. As the trail crosses into the SPNM class, it begins to climb. Character of the trail changes, it is in old growth forest and crosses snow slide paths. Several stretches of the trail are intersected by and/or used as bear trails.

Experience potentials are increased with the addition of these facilities. Interpretation/education opportunities increase with the presentation of the history of mining in the area. The Titan Trail, a day use opportunity in this alternative, increases interaction with the natural environment and gives limited opportunities to use outdoor skills.

<u>Facility</u>	<u>Experience</u>	<u>Cost</u>
Boundary House	Social, Educational, Interpretation	\$ 4,000
Fish Creek Deck	Social, Educational, Interpretation	\$ 4,500
Picnic Sites	Social	\$ 3,500
Mining Interpretation	Education, Social, Interpretation	\$ 6,000
Titan Trail	Outdoor skill, Interact with environment	<u>\$ 2,000</u>
	Total	\$20,000



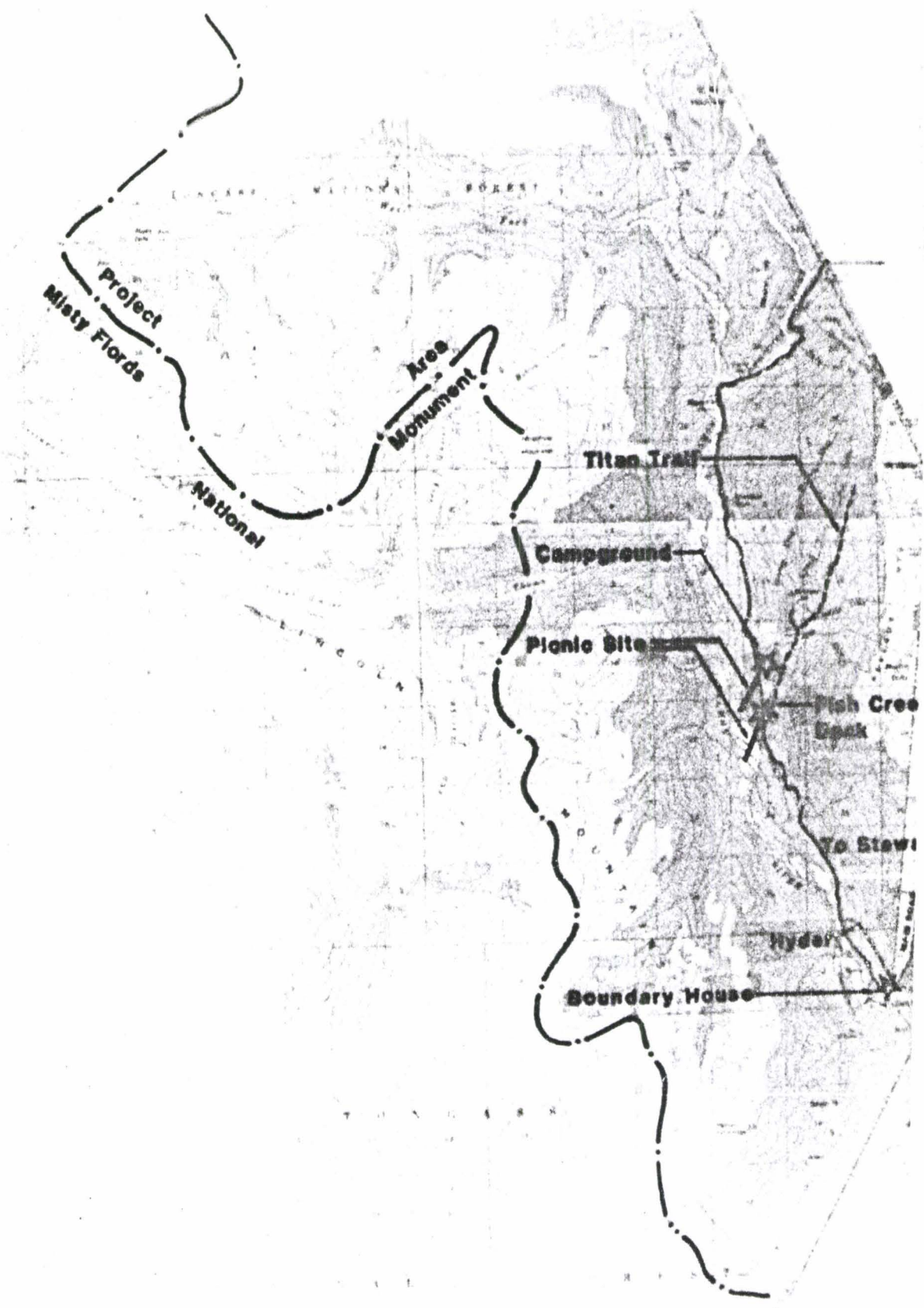
ALTERNATIVE 2

Alternative Three

Roaded Natural and Semi-Primitive Non-Motorized opportunities are respectively increased by addition of a level campground and the upper section of the Titan Trail. Social, educational, and interpretive experience opportunities are retained in the Rural class while they are changed in the RN class with elimination of mining interpretation. The provision of overnight facilities by the campground would retain visitors in the area. This also would increase chances for interaction among visitors and residents, allow additional time for exploration of the area, and meet resident's economic needs to encourage visitors to remain.

The upper section of the Titan Trail, 2 miles, branches from the lower section within the SPNM class. It quickly begins to climb toward alpine as the trails character once again changes. Passing through meadows and large snow slide paths, the trail accesses dramatic views down the Salmon River Valley and to the surrounding mountains. When it reaches alpine, the trail ends, creating opportunities for off-trail experiences. Chances to use outdoor skills and interact with the natural environment are increased as the trail passes through areas where the sights and sounds of man are rare. Experiences related to outdoor skill, isolation, and independence are available at the highest level if recreationists choose off-trail travel in alpine. Due to its relatively close proximity to the main road, experiences related to the trail are not rated as high as more remote areas.

<u>Facility</u>	<u>Experience</u>	<u>Cost</u>
Boundary House	Social, Educational, Interpretation	\$ 4,000
Fish Creek Deck	Social, Educational, Interpretation	\$ 4,500
Picnic Sites	Social	\$ 3,500
Campground	Social Outdoor skills	\$15,000
Titan Trail	Outdoor skills, Interact with environment, Risk, Independence	<u>\$ 4,000</u>
	Total	\$31,000



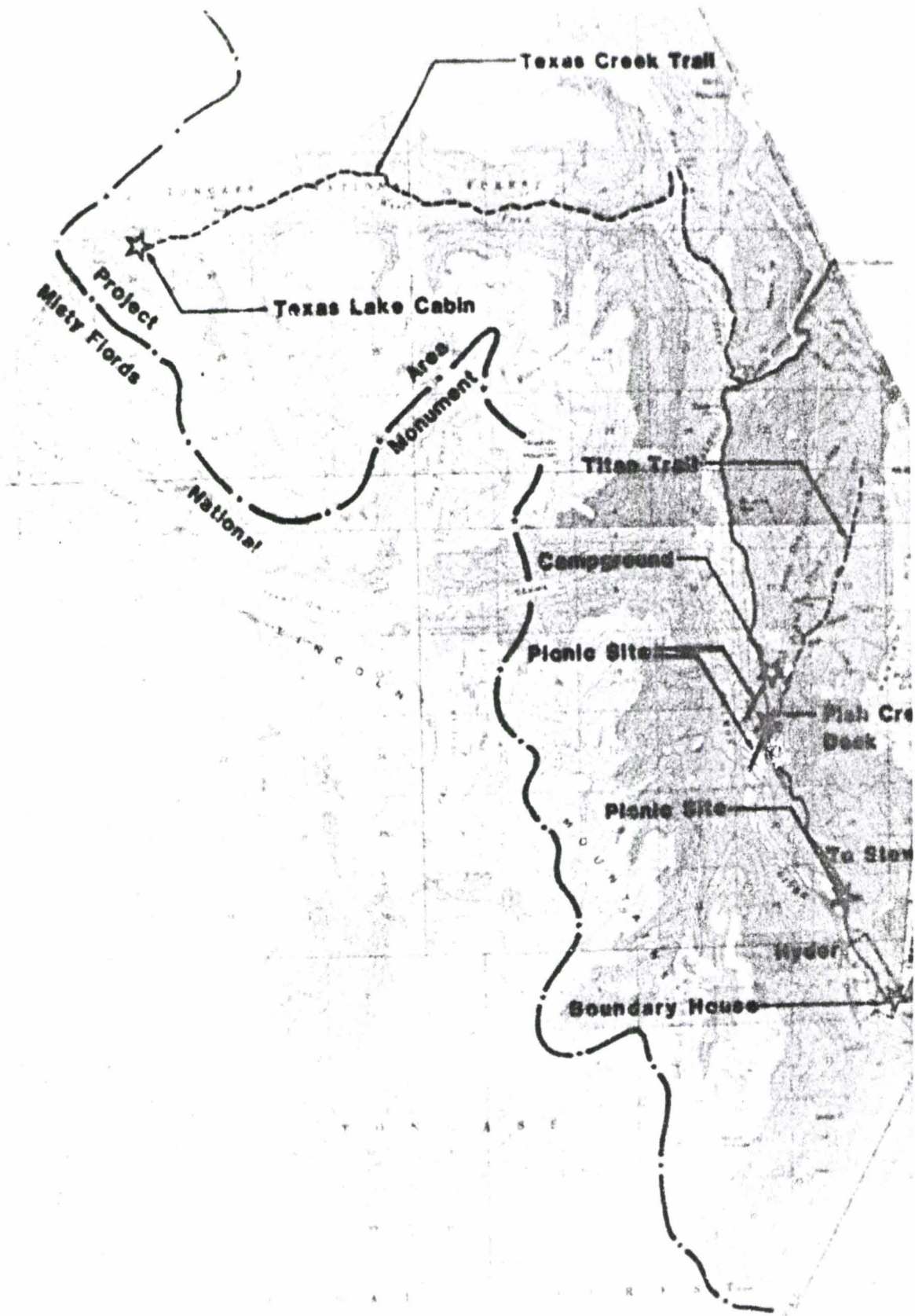
ALTERNATIVE 3

Alternative Four

Rural, Roaded Natural, and Semi-Primitive Non-Motorized opportunities are retained as they are presented in alternative 3. Primitive II opportunities are added by the inclusion of the Texas Creek Trail and Texas Lake Cabin.

Leaving the main road at the Salmon River bend, the Texas Creek trail follows the abandoned road. Development of the trail including a trailhead, signing, brushing, and two major bridges would give recreationists access to the Texas Creek Valley. The trail would be at a relatively low elevation its entire length, changing character as it progressed toward the Chickamin Glacier. Gradient of the lower trail section is gentle as it passes through old growth timber. As it reaches the more recently glaciated area, the trail begins to climb a side hill with vegetation changing to brush and smaller timber until it reaches low ground vegetation and bare rock. The entire length of the trail is through remote back country. As a result of the lack of bridge crossings of the Salmon River and Texas Creek, chances to contact the sights and sounds of people are extremely rare. With stream crossings provided, the area would still retain its primitive character, but the opportunities to contact other trail users would be increased. The Texas Lake cabin, located near the trail's end and the border of Misty Fjords National Monument, is in a strategic location to provide a turn-around point or a way-stop for exploration of the immediate area or further travel. Rehabilitation of the cabin would create opportunity for a unique trail experience. Trail access to the Texas Creek Valley would create opportunities to experience risk, isolation, and independence at a high level, to closely interact with the natural environment, and to utilize outdoor skills to a high degree.

<u>Facility</u>	<u>Experience</u>	<u>Cost</u>
Boundary House	Social, Educational, Interpretation	\$ 4,000
Fish Creek Deck	Social, Educational, Interpretation	\$ 4,500
Picnic Sites	Social	\$ 3,500
Campground	Social, Outdoor skills	\$15,000
Titan Trail	Outdoor skills, Interact with environment, Risk, Independence	\$ 4,000
Texas Creek Trail	Outdoor skills, Interact with environment, Risk, Independence	\$60,000
Texas Creek Cabin	Outdoor skills, Independence	<u>\$ 6,000</u>
	Total	\$97,000



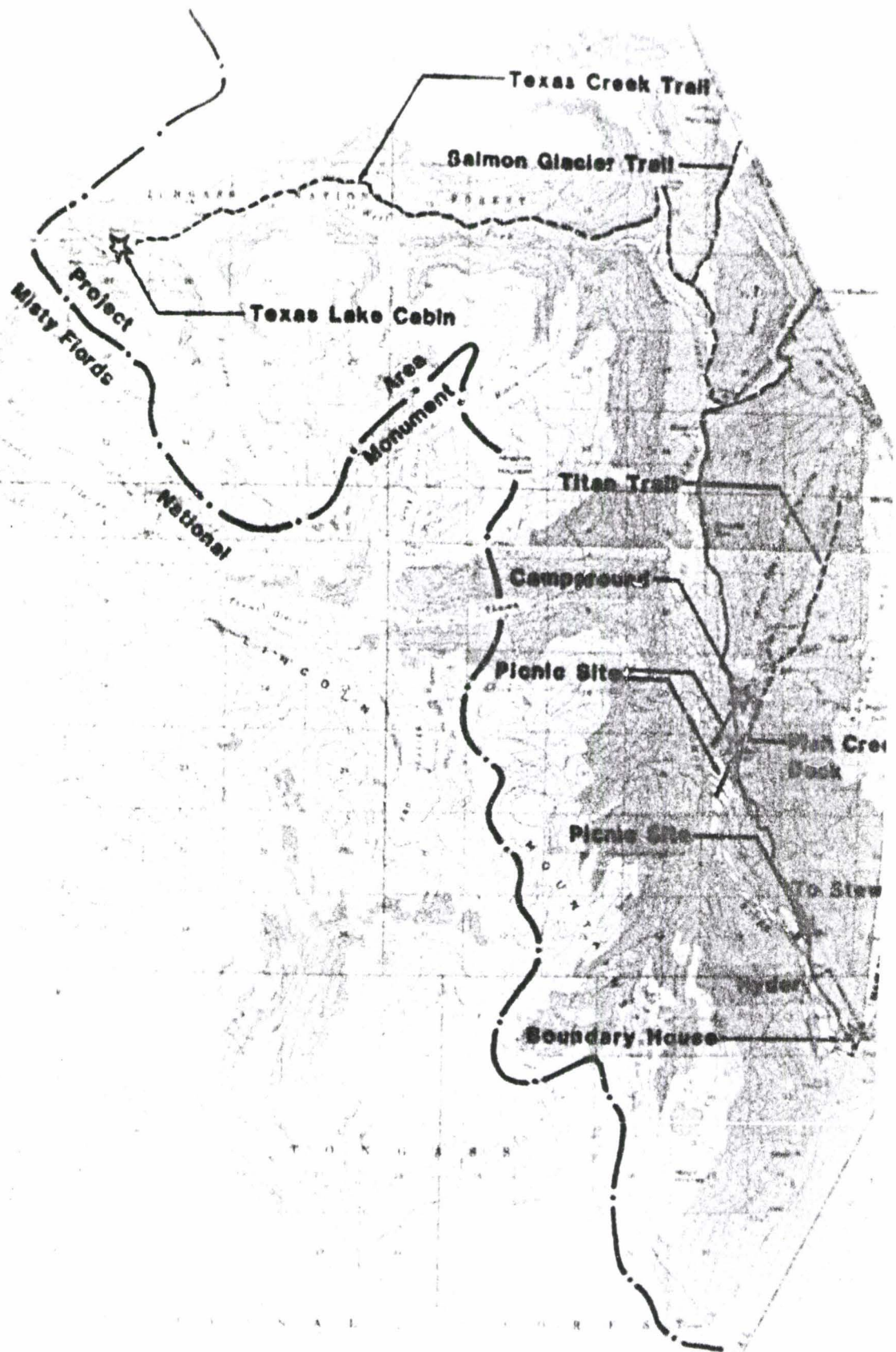
ALTERNATIVE 4

Alternative Five

The Rural, Roaded Natural, and Semi-Primitive Non-Motorized opportunities of Alternative 3 are retained while Primitive II opportunities of Alternative 4 are increased, and potential for Primitive I opportunities are added.

Addition of the Salmon Glacier Trail would increase existing experience potentials in the Texas Creek Primitive II Area. Development of the trail including signing and brushing would provide a side trip off of the Texas Creek Trail and views up the Salmon River Valley to the Salmon Glacier. Primitive I opportunities would be made available by a decision to publicize and sign access to the Chickamin River Valley in Misty Fiords National Monument. Potential to experience risk, isolation, and independence plus opportunities to use outdoor skills and interact with the natural environment are increased to the highest degree.

<u>Facility</u>	<u>Experience</u>	<u>Cost</u>
Facilities included in Alternative 4		\$96,000
Salmon Glacier Trail	Outdoor skills, Risk, Independence, Isolation, Interact with environment	\$3,000
Primitive I Access		<u>\$3,000</u>
	Total	\$103,000



ALTERNATIVE 5

Evaluation of Alternatives

Review of the alternatives shows that costs of implementation increase from Alternative 1 through to Alternative 5. Alternatives 1, 2, and 3 meet the needs of residents of Hyder and the majority of visitors. Information and interpretation are provided through the Boundary House, Fish Creek, and mining interpretation. Day use needs are met with these developments and the picnic sites. The desire of Hyder residents to retain visitors in the area is only partially met in Alternatives 1 and 2 as these facilities would only provide short duration attractions. The lower section of the Titan Trail in Alternative 2 is an additional day use facility, but does not meet trail needs. Alternative 3 with the campground provides overnight/extended stay facilities that meet the desires of Hyder residents to retain visitors in the area and the visitor's needs for camping. Reconstruction of the entire Titan Trail provides an excellent trail opportunity, but does not fully access the extensive back country potentials of the project area.

Although Alternative 4 drastically increases in cost over Alternative 3, it also dramatically increases in the range of potential experiences. It jumps from the predominantly road oriented experiences of Alternatives 1 and 2 and the limited back country experiences of Alternative 3 to high quality primitive experiences in the Texas Creek Valley. Alternative 5 does not have a large increase in cost over Alternative 4, however, a significant increase in primitive experience opportunities occurs by providing access to the Chickamin River Valley in Misty Fjords National Monument.

Of the 5 alternatives, Alternative 3 best meets the needs of Forest visitors and the community of Hyder while requiring moderate costs to implement. It does not, however, provide a wide variety of experience opportunities or take advantage of the primitive character of much of the project area. Alternative 4 does provide a broad range of experience opportunities by accessing large primitive areas while also meeting the needs of the majority of Forest visitors. It does require a larger investment in time and a significantly larger budget to implement. Alternative 5 expands primitive opportunities, but requires a decision that will be difficult to gain. Bypassing or crossing of the Chickamin Glacier is viewed as a safety hazard, and, therefore, signing or publicizing the opportunity is discouraged.

Chapter V

Summary

This chapter will discuss methods to implement alternatives, implications of implementation, and a recommended alternative.

Recent changes in philosophy combined with substantial budget reduction have required recreation managers to find alternate and creative means to operate, maintain, and construct facilities. Methods proven to be effective have been concessionaire, volunteer, and cooperative agreements. An additional option that may provide facilities to meet recreation needs is private sector involvement in recreation management. Several of the recreation facilities identified in this paper can be implemented through all the methods listed above. Other facilities, due to their characteristics or location can only be implemented through selected methods.

All development proposed in the alternatives presented here can be implemented through volunteer efforts. With Forest Service assistance through purchase of materials and provision of technical advice, the facilities can be constructed by residents of Hyder. Preliminary discussions with the Hyder Community Association indicate a willingness to act as a volunteer organization. Forest Service personnel would design and layout facilities as well as act as construction inspectors. Sufficient skills and equipment are present in Hyder to accomplish the projects.

A concessionaire agreement to construct and operate the proposed interpretive facilities and campground may better meet community needs and insure operation and maintenance to Forest Service standards. As documented, residents stated that they would like to establish facilities that encourage visitors to remain and that generate income. Concessionaire operation of either facility would meet these desires. As previously discussed, Forest Service presence in the area is a desirable goal and requested by residents. However, appearance and condition of facilities is critical. A campground and interpretive facility would probably receive the highest visitor use of any of the proposed developments. Both types of facilities are highly visible and immediately identified with the Forest Service. Concessionaire agreements for operation

and maintenance would establish a contractual relationship and thus ensure operations to Forest Service standards. Trails and day-use facilities do not collect revenue and, therefore, are not likely to be proposed for concessionaire operation. Their locations and characteristics make them more appropriate for volunteer development and maintenance or total Forest Service operation.

Potential exists to create a cooperative agreement for construction and maintenance of recreation facilities with the State of Alaska Division of Parks and Department of Transportation. Ferry Service to Hyder by the Alaska Marine Highway is being provided this summer on an experimental basis. If use reaches a sufficient level the State of Alaska has tentatively committed to construction of a docking and terminal facility. Establishment of this facility in Hyder would draw additional visitors to the area and introduce a government presence. Ferry arrivals and departures occur at all hours of the night and day, creating needs for overnight facilities. Hyder would be publicized as a transportation point resulting in a dramatic increase in its visibility. To operate the facility, State employees and U.S. Customs Officials, would be stationed in Hyder. In conjunction with planning of a terminal, it might be possible to develop a cooperative agreement between the Forest Service and State of Alaska to create a recreation development, operation and maintenance program. The commitment and responsibility of each party could vary through their ability or willingness to participate. Potential agreements could range from Forest Service provision of sites and materials with volunteer construction and State maintenance to Forest Service technical services with State provision of land and State construction and maintenance. Solutions for funding, construction, operation, and long-term maintenance could be found through a cooperative agreement.

Involvement of the private sector in recreation development has many potential benefits. However, the scope of involvement due to profit necessity and land ownership may be limited to facilities such as campgrounds, day-use areas, and visitor centers. Private sector involvement could be encouraged through actions similar in philosophy to the Touch America Program. The Forest Service could act as a catalyst, source of information, and technical advisor to stimulate private development on State or private land. Construction of a ferry terminal may encourage private investment in recreation facilities as a steady flow of visitors would be a certainty.

Implications

As with any action, implementation of any of the alternatives will result in change, both positive and negative. All alternatives will enhance visitors experiences. In the present situation of no interpretive facility, no established use areas, and limited access, visitors have few opportunities to take advantage of potential experiences. Provision of any of the proposed facilities will aid visitors in experiencing "The Last Frontier."

Development of any of the proposed facilities will identify the area as National Forest and establish a Forest Service presence.

Acknowledgement of recreation use in Hyder through development of recreation opportunities will potentially create resource use conflicts. L.U.D. III and IV classifications provide for all resource uses. Although timber harvest in the area is possible, it is not expected to be a major activity as the great majority of commercial timber was harvested in the early 1960's. Mining potential is, however, high. Presently, there are several claims in the area, but no active mines. Geologic formations indicate the area is mineralized. Hyder has become in the past 2 years a very active and politically aware community. Residents recognize potentials and desire that the town improve and grow. Implementation of any of the alternatives would aid them in accomplishing their goals. Positive Forest Service input to the community would create cooperation and "good will." This would make management of the area an easier task.

Alternative Recommendation

Based on the potential to meet the needs of the majority of Forest visitors and the Community of Hyder and to provide a broad range of recreation experiences, Alternative 4 is recommended.

Implementation would require a combination of the methods previously discussed. A campground, day-use areas, and visitor center could be developed using any of the four methods. Each has positive aspects and selection of one

would require analysis to determine feasibility and interest. A concessionaire or volunteer agreement could eventually require Forest Service assumption of operation and maintenance responsibilities. A cooperative agreement with the State of Alaska or private development would probably ensure that the Forest Service did not become involved in operation and maintenance. Dispersed facilities such as trails and cabins, due to their characteristics and the landownership, are limited to volunteer or total Forest Service implementation. Reconstruction of the proposed trail facilities, although initially costly if properly accomplished, would require minimal to moderate maintenance.

If implementation methods were selected that require direct Forest Service involvement, each project requiring funding would need to be entered into the Ketchikan Area five-year recreation construction priority list. Projects would then be evaluated based on established criteria that reflect National and Regional direction.

Following is the order in which the Ketchikan Ranger District would enter projects. It reflects the cost and benefit to the public of each project.

1. Boundary House Interpretive Facility.
2. Fish Creek Interpretive Platform
3. Campground
4. Titan Trail
5. Texas Lake Cabin
6. Texas Creek Trail

Through this paper, the author believes that the recreation needs, character, and potentials of the Hyder area have been effectively presented. The opportunities and experiences identified are equal to any in Southeast Alaska. Alternatives presented make it possible to plan facilities that are responsive to needs and establish recreation management and a Forest Service presence in the area.

Appendix A

Appendix A

1. "Discussion with Canadian Customs Official," August 1984. The following information was obtained by the author during this discussion.

The Custom Official stated "American tourism to Hyder is increasing. It is mostly older, retired people."

The Cassiar Highway is becoming well known and is beginning to be preferred over the Alaska/Canada Highway to access interior Alaska and the Northwest Territory.

Visitors come to see Alaska, "The Last Frontier." The Custom Official recommended tripling the count he had collected to determine actual visitation. The official count for 1983 was 34,000 visitors.

2. "Alaska Marine Highway Task Force Report."

The following information was derived from the report.

"Stewart, B.C., has a large and popular R.V. park which is full to capacity the majority of the park season. Thirty four thousand tourists arrived in Stewart/Hyder during the summer months of 1983.

The Task Force recommended Ferry service to Hyder twice a week in the peak season.

Ferry service out of Hyder would draw much of the existing service from Prince Rupert. The Ferry would be full each run.

3. "Public Meeting with Hyder residents by the Marine Highway Task Force," January 11, 1984.

Residents wish to promote tourism.

Residents feel Hyder has "great potential for tourism development."

4. "Public Meeting, U.S. Forest Service and Hyder Residents," August 1984.

Residents made the following statements.

Hyder has tourism potential.

They would like the Forest Service to construct a campground to help keep visitors in the area.

The Titan Trail was brushed and improved by the Community. The Community obtained CETA funds to have local youth do the work.

They would volunteer to do trail rehabilitation and maintenance, especially the Texas Creek Trail.

The cabin on Texas Lake gets use from Hyder residents who travel to it by snow machine.

Others access the cabin by helicopter.

Tourists camp on the river dikes and turn-outs for lack of any other places to camp.

5. Personal observations of the author.

Hunters travel to the Hyder area in search of bear and mountain goats. Access to areas with hunting potential is poor or non-existent.

The Forest Service receives a significant number of telephone inquiries concerning hiking trails and access to remote areas, specifically Misty Fjords National Monument. Callers wish to have extended trips in remote Alaska.

The group of hikers that explored the Texas Creek Valley stated that it was a difficult trip due to brush. They suggested brushing a trail. They stated that the area had tremendous potential.

Travel to the Hyder area is quick and convenient now that the Cossiar Highway is paved.

Campers observed in the area were mainly using R.V.'s.

Appendix B

Region 10 Recreation Opportunity

Spectrum Handbook

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

RECREATION INPUT TO
LAND AND RESOURCE MANAGEMENT PLANNING

Contents

Introduction

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- 20 SUPPLY
- 30 DEMAND
- 40 RECREATION INPUT INTEGRATION WITH LMP

RECREATION INPUT TO LAND AND RESOURCE MANAGEMENT PLANNING

Introduction

This Regional Handbook serves as a guide for the recreation resource input to Land and Resource Management Planning. It incorporates the Recreation Opportunity Spectrum as the basic framework for planning and managing the recreation resource in accordance with the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA).

The recently published ROS User's Guide should also be referred to due to the many helpful illustrations it contains of the end products which result from following Handbook procedures. Since this version of the procedures is considered more applicable to the Alaska Region, however, the User's Guide should be used for reference purposes only.

RECREATION INPUT TO
LAND AND RESOURCE MANAGEMENT PLANNING

SECTION 10 - CONCEPTS

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- 12 RECREATION OPPORTUNITY
- 13 RECREATION OPPORTUNITY SPECTRUM
- 14 RECREATION INPUT TO LAND AND RESOURCE MANAGEMENT PLANNING
- 15 MANAGEMENT PRESCRIPTIONS
- 16 PROJECT PLANNING

SECTION 10 - CONCEPTS

11 - RECREATION - Many definitions of recreation exist, each emphasizing some slightly different aspect of this complex phenomenon called "recreation." In the Recreational Use of Wild Lands, Frank Brockman defines recreation as "the pleasurable and constructive use of spare time." Howard Danford, in Creative Leadership in Recreation, defines recreation as "any socially desirable leisure activity in which an individual participates voluntarily and from which he derives immediate and continuing satisfaction." Webster defines recreation as "refreshment in mind and body."

The sense of creativeness, refreshment and pleasure which the recreationist has while recreating or having a good time can be viewed as the recreationist "realizing satisfactory experiences." The recreationist attains these satisfactory experiences by participating in preferred recreation activities in preferred surroundings or settings. Therefore, although the recreation resource manager manages settings, he or she does so to provide opportunities for recreation experiences and the benefits these experiences produce for individuals and society. Those experiences are influenced by the nature of environmental settings, the presence and activities of others, the actions of managers, and by the values, expectations and other characteristics of the recreationists.

"Managing for recreation requires different kinds of data management concepts than does most other activities. While recreation must have a physical base of land or water, the product--recreation experience--is a personal or social phenomenon. Although the management is resource based, the actual recreational activities are a result of people, their perceptions, wants, and behavior." (From: Final Report of the Committee of Scientists for Implementation of Section 6 of the National Forest Management Act of 1976, February 22, 1979, as published in the Federal Register, Part V, May 4, 1979, p. 26628.)

12 - RECREATION OPPORTUNITY - The word opportunity is defined as a "combination of circumstances favorable for a purpose." The purpose or goal of the recreationist, as discussed above, is to realize satisfying experiences. This is done by participating in preferred activities in preferred environmental settings. Thus, recreation opportunity is "the availability of a real choice for a user to participate in a preferred activity within a preferred setting, in order to realize those satisfying experiences which are desired."

13 - RECREATION OPPORTUNITY SPECTRUM - While the goal of the recreationist is to obtain satisfying experiences, the goal of the recreation resource manager becomes one of providing the opportunities for obtaining these experiences. By purposefully managing environmental settings and the activities which occur within them, the manager is providing the opportunities for publicly desired recreation experiences.

For management and conceptual convenience possible mixes or combinations of activities, settings, and probable experience opportunities have been arranged along a continuum or spectrum. This is called the Recreation Opportunity Spectrum (ROS) and is divided into eight classes (Figure 1). These classes, or portions along the Spectrum, and the accompanying class names have been selected and conventionalized because of their descriptiveness and utility in Land and Resource Management Planning and other management applications.

Figure 1
Recreation Opportunity Spectrum

Primitive I (PI)	Primitive II (PII)	Semi- Primitive Non- Motorized (SPNM)	Semi- Primitive Motorized (SPM)	Roaded Natural (RN)	Roaded Modified (RM)	Rural (R)	Urban (U)
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These eight classes equate with the six basic classes in the National Handbook in the following manner:

<u>National Classes</u>	<u>R-10 Classes</u>
P	Combination of PI and PII
SPM	SPM (Same)
SPNM	SPNM (Same)
RN	Combination of RN and RM
R	R (Same)
U	U (Same)

Each class is defined in terms of its combination of setting characteristics and related activity and experience opportunities (Table 1). The Recreation Opportunity Spectrum provides a framework for defining the types of outdoor recreation opportunities the public might desire and the portion of the Spectrum a given National Forest might be able to provide.

14 - RECREATION INPUT TO LAND AND RESOURCE MANAGEMENT PLANNING - Planning for recreation opportunities using the Recreation Opportunity Spectrum is conducted as part of Land and Resource Management Planning. The recreation input deals with the entire array of considerations which the planner must assess--such as supply and demand and identification of appropriate agency roles and responsibilities in providing outdoor recreation opportunities--in order to develop management area prescriptions designed to provide appropriate recreation opportunities on a Forest.

Use of the Recreation Opportunity Spectrum for Land and Resource Management Planning provides a framework for:

1. Determining the nature and adequacy of the current supply of recreation opportunities.
2. Establishing outdoor recreation management objectives for specific management areas to maintain existing recreation opportunities or create new ones.
3. Trade-off analyses of how recreation opportunities could be changed by proposed resource management actions.
4. Monitoring the actual management of recreation settings in relation to planned management objectives.
5. Providing specific standards and guidelines for project level activities.

Table 1a

ROS Setting Characteristics*

Primitive I	Primitive II	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Roaded Modified	Rural	Urban
Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.	Area is characterized by essentially unmodified natural environment. Interaction between users is very low and evidence of other users is minimal. The area is managed to have minimum human-induced restrictions and controls. Facilities are provided primarily for user health and safety. Motorized use within the area is permitted but does not commonly occur.	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present but are subtle. Motorized use is not permitted.	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present but are subtle. Motorized use is permitted.	Area is characterized by predominantly natural-appearing environments with moderate evidences of sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low-to-moderate but with evidence of other users prevalent. Resource modification and utilization practices are evident but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.	Area is characterized by predominantly modified appearing environment. Resource modification and utilization practices are common and are primarily for specific purposes other than recreation. Vegetative cover is substantially modified. Sights and sounds of humans may be evident and the interaction between recreating and working users may be high. Facilities are not normally provided. Conventional motorized use may be provided for in construction standards and design of facilities.	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident and interaction between users is often moderate-to-high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.	Area is characterized by a substantially modified environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans, on-site, are predominant. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

*This table is for descriptive purposes only. Use the specific ROS class delineation criteria in Table 2 to identify the actual areas to which these descriptions apply.

Table 1b
ROS Activity Opportunities*

Recreation Activities (See RIM Handbook for Activity Definitions)	RIM Code	Primitive I	Primitive II	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Roaded Modified	Rural	Urban
<u>Viewing Scenes, Activities & Objects</u>									
Viewing Scenery	1.1	X	X	X	X	X	X	X	
Viewing Activities (Spectator)	1.3					X	X	X	X
Viewing works of Humankind	1.4					X	X	X	X
<u>Travel - Land, Air and Water</u>									
Automobile	11.1				X	X	X	X	X
Motorcycles and Scooters	11.2				X	X	X	X	X
Ice and Snow Craft	11.3		X		X	X	X	X	
Specialized Land Craft (ATV's)	11.4				X	X	X	X	
Train and bus touring	11.5					X	X	X	X
Tour boat, Ship, Ferry	12.1				X	X	X	X	X
Boat, Powered	12.2		X		X	X	X	X	X
Aircraft, Motorized	13.1		X		X	X	X	X	X
Aerial Trains and Lifts	13.2							X	X
Aircraft, Non-Motorized	13.3					X	X	X	
Hiking and Walking	14.1	X	X	X	X	X	X	X	X
Bicycle	14.2					X	X	X	X
Horseback Riding	14.3	X	X	X	X	X	X	X	X
Canoeing (& other light paddle-craft)	15.1	X	X	X	X	X		X	
Sailing	15.2	X	X	X	X	X	X	X	X
Other watercraft, Non-Motorized	15.3	X	X	X	X	X	X	X	X
<u>Sports/Games</u>									
Team Sports	21.1							X	X
Individual Sports	21.2							X	X
Games and Play	21.3				X	X	X	X	X
<u>Water Sports and Play</u>									
Swimming and waterplay	22.1	X	X	X	X	X	X	X	X
Diving	22.2		X		X	X	X	X	
Waterskiing and other water Sports	22.3				X	X	X	X	
<u>Fishing</u>									
Cold water Fishing	31.1	X	X	X	X	X	X	X	
Warm water Fishing	31.2	X	X	X	X	X	X	X	
Salt water Fishing	31.3	X	X	X	X	X	X	X	
Ice Fishing	31.3	X	X	X	X	X	X	X	

Table 1b
(Continuation)

Recreation Activities (See RIM Handbook for Activity definitions)	RIM Code	Primitive I	Primitive II	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Roaded Modified	Rural	Urban
<u>Camping</u>									
General Day Camping	41.1	X	X	X	X	X	X	X	
Automobile Camping	41.2				X	X	X	X	X
Trailer Camping	41.3					X	X	X	X
Tent Camping	41.4	X	X	X	X	X	X	X	
Organization Camping, Day	41.5					X	X	X	
Organization Camping, Night	41.6					X	X	X	
<u>Picnicking</u>	43.1			X	X	X	X	X	X
<u>Lodging and Accommodations</u>									
General Resort & Commercial Public Service	46.1								
Resort Lodging			X		X	X	X		
Recreation Cabin Use			X	X	X	X			
<u>Winter Sports</u>									
Ice Skating	51.1					X	X	X	X
Sledding, Tobogganing	51.2				X	X	X	X	X
Downhill Skiing	51.3		X**		X**	X	X	X	X
Snow Play	51.4				X	X	X	X	X
Cross-Country Skiing, Snowshoeing	51.5	X	X	X	X	X	X	X	X
<u>Hunting (Including Trapping)</u>									
Big Game Hunting	61.1	X	X	X	X	X	X		
Small Game Hunting	61.2	X	X	X	X	X	X		
Upland Bird Hunting	61.3	X	X	X	X	X	X		
Waterfowl Hunting	61.4	X	X	X	X	X	X		
<u>Nature Study</u>									
Nature Study (Wildlife, Birds & Fish)	62.1	X	X	X	X	X	X		
Nature Study (All Other)	62.2	X	X	X	X	X	X	X	
<u>Mountain Climbing</u>	63.1	X	X	X	X	X	X		

* These Activity opportunities are generally associated with the setting characteristics of each RUS class.

** Hill-skiing opportunities.

Table 1b
(Continuation)

(See RIM Handbook for Recreation Activities Activity definitions)		RIM Code	Primitive I	Primitive II	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Roaded Modified	Rural	Urban
<u>Gathering Forest Products</u>		64.1			X	X	X	X	X	
<u>Interpretive Activities</u>										
Viewing Interpretive Exhibits	81.1								X	X
Attending Talks and Programs	81.2						X	X	X	X
Touring, Guided	81.3						X	X	X	X
Touring, Unguided	81.4						X	X	X	X
Walking, Guided	81.5						X	X	X	X
Walking, Unguided	81.6						X	X	X	X
Viewing Interpretive Signs	81.7				X	X	X	X	X	X
Listening to Audio Programs	81.8						X	X	X	X
General Information	81.9								X	X

Table 1c

ROS Experience Opportunities*

Primitive I	Primitive II	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Roaded Modified	Rural	Urban
Extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the application of woodsman and outdoor skills in an environment that offers a high degree of challenge and risk.	Extremely high probability at most times of experiencing isolation from the sights and sounds of humans. Isolated instances of sights and sounds of humans prevalent. Independence, closeness to nature, tranquility and self-reliance through application of woodsman and outdoor skills in an environment that offers a high degree of challenge and risk at all times.	High but not extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk.	Moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk. Opportunity to have a high degree of interaction with the natural environment. Opportunity to use motorized equipment while in the area.	About equal probability to experience affiliation with other user groups and for isolation from sights and sounds of humans. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with more primitive type of recreation are not very important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and non-motorized forms of recreation are possible.	Little opportunity for isolation from sights and sounds of humans. Numerous opportunities to interact with examples of utilization of the forest resources. Challenge and risk opportunities are not normally important. Opportunities for both motorized and non-motorized forms of recreation are possible.	Probability for experiencing affiliation with individuals and groups is prevalent as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wild-land challenges, risk-taking and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk-taking are important elements.	Probability for experiencing affiliation with individuals and groups is prevalent as is the convenience of sites and opportunities. Experiencing natural environments, having challenges and risks afforded by the natural environment and the use of outdoor skills are relatively unimportant. Opportunities for competitive and spectator sports and for passive uses of highly human-influenced parks and open spaces are common.

*These experience opportunities are highly probable outcomes of participating in recreation activities in specific recreation settings.